

CLAIMS

What is claimed is:

- 1) A device for maintaining an upper airway passage comprising:
 - a) A soft tissue retractor member;
 - b) A shaft connected at a first end to said retractor member; and
 - c) An anchor member connected to said shaft at a second end,wherein said retractor member, said shaft and said anchor member comprise biocompatible materials.
- 2) The device of claim 1 in which said retractor member comprises an inflatable balloon.
- 3) The device of claim 1 in which said anchor member comprises an inflatable balloon.
- 4) The device of claim 2 in which said anchor member comprises an inflatable balloon.
- 5) The device of claim 2 further comprising a conduit for adding a fluid.
- 6) The device of claim 5 in which said fluid comprises a gaseous material.
- 7) The device of claim 5 in which said fluid comprises a liquid.
- 8) The device of claim 5 further comprising a regulator for said fluid.
- 9) The device of claim 1 in which said shaft is at least one of bendable and reversibly extendable.
- 10) The device of claim 9 in which one of the group consisting of said retractor member, said shaft, and said anchor member extends while maintaining a sufficient force to maintain an open upper airway.
- 11) The device of claim 1 in which said connection between said retractor member and said shaft is disengagable.

- 12) The device of claim 1 in which said connection between said anchor member and said shaft is disengagable.
- 13) The device of claim 1 in which said shaft comprises an internal passageway.
- 14) A method of maintaining an open passageway in the upper airway of a patient comprising:
- a) Placing a retractor member against the base of said patients tongue;
 - b) Connecting said retractor member to a trans-tongue shaft; and
 - c) Connecting said trans-tongue shaft to an anchor removed from said retractor member.
- 15) The method of claim 14 in which said anchor is in the frenulum region of said patient.
- 16) The method of claim 14 in which said anchor is in communication with a muscle of said patient that is active during sleep.
- 17) The method of claim 14 in which said anchor is connected to at least one of said patient's teeth, a dental device, and a mount exterior to said patient's mouth.
- 18) The device of claim 1, further comprising a connection to at least one of the patient's pharynx, oral cavity, teeth, and a mount exterior to the mouth.
- 19) A device for communication with at least one of the gastrointestinal tract and the respiratory system of a patient in need of said communication comprising:
- a) A trans-tongue member having an aperture; and
 - b) A tube passing through said trans-tongue member adapted for communication between the exterior of said patient and a portion of at least one of said patient's gastrointestinal tract and respiratory system.
- 20) A device for monitoring the health of a patient comprising:

- a) A trans-tongue member; and
 - b) A sensor coupled to said trans-tongue member.
- 21) The device of claim 20 in which said sensor comprises at least one of a mechanical transducer and a chemical detector.
- 22) The device of claim 20 in which said sensor measures at least one of a condition in a portion of the tissue near said sensor and a condition in a portion of the circulatory system.
- 23) The device of claim 20 in which said device further comprises an electrode adapted to provide an electrical stimulus.
- 24) The device of claim 20 further comprising at least one member of the group consisting of a transmitter and a receiver.
- 25) A device for providing an electrical stimulus comprising:
- a) A trans-tongue member; and
 - b) An electrode adapted to provide an electrical stimulus.
- 26) A device for delivering a drug to a patient in need of said drug comprising:
- a) An implantable member having an aperture; and
 - b) A drug reservoir connected to said implantable member and adapted to gradually release said drug.
- 27) The device of claim 26 in which said implantable member comprises a bio-absorbable material.
- 28) The device of claim 19 in which said communication comprises fluid transport.
- 29) The device of claim 19 in which said communication comprises an imaging device.
- 30) The device of claim 29 in which said imaging device comprises a fiber optic.

- 31) The device of claim 19 comprising an endoscopic surgical member.